

SCIENCE AND TECHNOLOGY
COMMITTEE

First Report

THE PRIOR OPTIONS REVIEWS OF PUBLIC SECTOR
RESEARCH ESTABLISHMENTS

Report together with the
Proceedings of the Committee

*Ordered by The House of Commons to be printed
27th November 1996*

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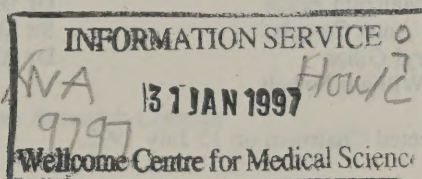


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The Science and Technology Committee is appointed under Standing Order No 130 to examine the expenditure, administration and policy of the Office of Science and Technology and associated public bodies.

The Committee consists of 11 Members. It has a quorum of three.

The Committee has power:

- (a) to send for persons, papers and records, to sit notwithstanding any adjournment of the House, to adjourn from place to place, and to report from time to time;
- (b) to appoint specialist advisers either to supply information which is not readily available or to elucidate matters of complexity within the Committee's order of reference;
- (c) to communicate to any other such committee and to the Committee of Public Accounts and to the Deregulation Committee its evidence and any other documents relating to matters of common interest; and
- (d) to meet concurrently with any other such committee for the purposes of deliberating, taking evidence, or considering draft reports.

Unless the House otherwise orders, all Members nominated to the Committee continue to be members of it for the remainder of the Parliament.

The following were nominated Members of the Committee on 13 July 1992:

Mr Spencer Batiste	Sir Giles Shaw
Dr Jeremy Bray	Sir Trevor Skeet
Mr Malcolm Bruce	Dr Gavin Strang
Mrs Anne Campbell	Sir Gerard Vaughan
Cheryl Gillan	Dr Alan W Williams
Mr William Powell	

Sir Giles Shaw was elected Chairman on 15 July 1992.

On 9 November 1992 Mr Malcolm Bruce was discharged and Mr Andrew Miller added to the Committee

On 16 November 1992 Dr Gavin Strang was discharged and Dr Lynne Jones added to the Committee.

On 7th November 1995 Cheryl Gillan and Mr William Powell were discharged and Mr Ian Bruce and Mr Patrick Thompson were added to the Committee.

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FIRST REPORT

THE PRIOR OPTIONS REVIEWS OF PUBLIC SECTOR RESEARCH ESTABLISHMENTS

The Science and Technology Committee has agreed to the following Report:

INTRODUCTION

1. The Prior Options Reviews of Public Sector Research Establishments which are now being undertaken followed a Multi-Departmental Scrutiny of Public Sector Research Establishments.¹ The Committee conducted an inquiry into that Scrutiny and has since kept a close watch on the course of the Prior Options process. At the Committee's request, the Chairman wrote to the Minister on several occasions last session and this correspondence was published with the Committee's Fifth Report of Session 1995-96.² That Report was a brief statement of the situation then prevailing and concluded

"We consider that the Department's policy on this matter is far from satisfactory. We report now to draw the attention of the House to this before the debate on Science Policy on Friday 19th July. We are likely to return to this issue in the next session."³

2. We issued a call for evidence on 24th July which received over thirty responses. We have also held two oral evidence sessions: the first with Mr Ian Taylor MBE MP, the Minister for Science and Technology, Professor Sir Robert May, the Chief Scientific Adviser (CSA), and Sir John Cadogan, the Director General of Research Councils (DGRC); the second with Sir Peter Levene, the Prime Minister's Adviser on Efficiency and Effectiveness. We are grateful to our witnesses. We have also been ably assisted by our Specialist Advisers, Professor Derek Burke and Sir Peter Swinnerton-Dyer.

THE REVIEW PROCESS

Context of the Reviews

3. The current reviews amount to the third major review of research establishments since 1992. The first, which was led by the Prime Minister's Adviser on Efficiency, Sir Peter Levene, and the then Chief Scientific Adviser, Sir William Stewart, entitled *Review of Allocation, Management and Use of Government Expenditure on Science and Technology*⁴ (the Levene-Stewart Review), was a desk study made in preparation for the 1993 White Paper, *Realising our Potential*.⁵ This recommended that the Government Research Establishments (GREs), ie, those establishments directly "owned" by individual departments, should be distanced from their parent departments and that, in the long term, privatisation might prove the appropriate outcome. The Review found less to criticise in Research Council Institutes (RCIs), since they were already subject to review and restructuring by the Research Councils, and recommended no such wholesale reform in their case, although it recommended

¹Multi Departmental Scrutiny of Public Sector Research Establishments; an Efficiency Unit Scrutiny, HMSO, 1994.

²The Prior Options Reviews of Public Sector Research Establishments, HC 643.

³Ibid, p.vi.

⁴HMSO, May 1993.

⁵Cm 2250.

that the trend to closer relationships between RCIs, Higher Education Institutions and industry be encouraged.⁶

4. The White Paper announced a multi-departmental scrutiny of public sector research establishments, which was conducted in 1994.⁷ Despite the recommendations of the Levene-Stewart Review, this Scrutiny included many Research Council Institutes and was much criticised for failing to distinguish adequately between the role of RCIs and that of GREs.⁸ The Government rejected the scrutiny's radical proposals that "establishments in the life sciences area be rationalised by grouping the establishments on the basis of market sector or geography, or by appointing Directors of Rationalisation to identify opportunities for rationalisation of capabilities or facilities,"⁹ Instead, it announced that there would be a series of individual Prior Options reviews for those organisations within the scrutiny which had not already been privatised. The establishments were grouped into three tranches so that organisations performing similar functions could be examined together to ensure there was no duplication or overlap. Individual review teams for each establishment would report to a steering group which covered all the establishments in each tranche and would, in turn, report to Ministers. Reports on the first tranche which covered eighteen establishments in agriculture/plant science, physical sciences and forensic/police science sectors were to be made by March 1996, on the second tranche of nine institutions covering animal science, marine and non-marine environment by July 1996 and on the final ten institutions in food, nutrition and health sectors by December 1996.¹⁰

5. We asked for sight of the Steering Group reports, but the Government declined on the grounds that they constituted advice to Ministers and, moreover, contained confidential information. Instead, as decisions on each institution were announced, the Government made memoranda based on the Prior Options reports available to the House.

Establishments Reviewed

6. One frequent criticism of the Prior Options review process (and of the Multi-Departmental Scrutiny before it) was that it was an attempt to deal with diverse institutions in a uniform way. Although the Minister assured us that the process was "a very diversified exercise trying to improve the quality of our Science Base,"¹¹ and the CSA emphasised the variety of institutions under review,¹² their perceptions were clearly not shared by those subject to the review process, or by outside onlookers.

7. In our Report on the multi-departmental scrutiny of public sector research establishments we distinguished between Government Research Establishments which have responsibilities for work directly underpinning policy development and compliance with regulations, and Research Council Institutes which are means "by which the parent Research Councils fulfil their mission" and remarked "As witnesses pointed out, it is dangerous to propose reorganisation without considering those missions."¹³ In our preliminary report on the current reviews we once again expressed our concern that this distinction was not properly

⁶*Review of Allocation, Management and Use of Government Expenditure on Science and Technology*, HMSO, May 1993, para 5.40.

⁷HMSO, June 1994.

⁸See First Report of Session 1994-95, *Efficiency Scrutiny of Public Sector Research Establishments*, HC 19, paras 7-9.

⁹*Public Sector Research Establishments: Government response to the Multi-Departmental Scrutiny of Public Sector Research Establishments*, Cm 2991, p.5.

¹⁰Details of the establishments to be reviewed will be found Annexed to this Report.

¹¹Q54.

¹²Q6.

¹³HC(1994-95)19, para 8.

appreciated. This concern was shared by many of those submitting evidence in the current inquiry.¹⁴

Results of the Reviews so far

8. No decisions have yet been announced on any of the institutions in the second or third tranche of reviews. The first reports were made on time, and Ministers announced their decisions on 22nd May. Final decisions have been taken on eight establishments; these were ADAS and the Building Research Establishment, which were to be privatised; the Directorate of Fisheries Research, Fisheries Research Services and the Forestry Commission Research Laboratory, which were to become Next Steps agencies; the Daresbury and Rutherford/Appleton Laboratories, which was to remain in the public sector, while further work on privatisation was carried out; and the Health and Safety Laboratory and the National Weights and Measures Laboratory, which were to retain their status as agencies.

9. The Central Science Laboratory (CSL) of the Ministry of Agriculture, Fisheries and Food was referred to PA Consultants for a further review; the Scottish Agricultural Science Agency was to be further examined by the Scottish Office; and there was no announcement on the Police Scientific Development Branch.

10. The remaining seven establishments in the first tranche (Horticulture Research International; Macaulay Land Use Research Institute; Scottish Crop Research Institute; Institute of Arable Crops Research; Institute of Grasslands and Environmental Research; the John Innes Centre; and the Silsoe Research Institute) were referred to a yet another review by a committee chaired by Sir Peter Levene which was to examine the practicalities of a move to "full independence from the public sector." Since then, the CSL has also been referred to Sir Peter's Committee.¹⁵

11. The full terms of reference of this committee have not been published, but Sir Peter told us that he had been asked to give "further advice on certain practical issues in relation to the privatisation option...These issues were...the handling of pensions and other costs which related to staff...for advice on the timetable for the privatisation of ADAS and...the best way forward on the Central Science Laboratory...and on Horticulture Research International."¹⁶ It appears that Sir Peter has also looked at some establishments in later tranches of the review process.¹⁷

12. The chief difficulty in transferring these institutes to full independence appears to have been the costs of crystallising the pension liabilities; as Sir Peter explained

"In most cases in the past expenditures on what we call pension crystallisation, in other words determining the lump sum which is required to fund the accumulated rights of pensions, have been related typically to civil servants and in that case they have been borne by this centrally managed civil superannuation¹⁸ vote which is outside of the control total for public expenditure. In many cases where there has been a positive income from the sale of the establishment there have been proceeds to set against that outlay. Staff in many of the public sector research establishments are pensioned differently and under arrangements

¹⁴See, for example, POD 22, POD 31.

¹⁵This Committee contained the Permanent Secretary of MAFF, the Secretary of the Scottish Office Agriculture, Environment and Fisheries Department, a Deputy Secretary from the Treasury, Mr Anthony Beattie, the former Chief Executive of the Natural Resources Institute, and the Chief Scientific Adviser; it was also occasionally attended by Sir John Cadogan, the Director General of Research Councils.

¹⁶Q84.

¹⁷Q47.

¹⁸Eg. staff in departmental research establishments.

for NDPBs (non-departmental bodies)¹⁹ the vote accounting is different and, in particular, the expenditures are within the control total. Those arrangements coupled with the balance between the likely proceeds and the liabilities to be transferred were the new issues which had to be looked at.”²⁰

From this we gather that the problems associated with pension crystallisation for Research Council Institutes differ from those associated with Departmental Research Establishments in the way that they are treated by the Treasury. Furthermore, the proceeds of any sale which might be offset against the costs of pension crystallisation are likely to be small.

The Chief Scientific Adviser said

“Peter Levene’s Committee...was created in an ad hoc way as a result of the discussions that made it clear that one of the technical things you would have to deal with in the course of privatisation was crystallising pensions...There are those who would thus ask: ‘Can a way be found to not make this an obstacle’ because the fact that you have to crystallise the pensions in one year is somehow curiously at odds with the fact that the money is going to have to come out of the public purse, the same amount of money.”²¹

13. In July the Minister told us that “Sir Peter’s work is expected to be completed within a matter of weeks, rather than months.”²² Although the OST took a lead in the reviews, as the Prime Minister’s Adviser on Efficiency, Sir Peter reported to the Cabinet sub-committee on competitiveness. Indeed, the Prior Options process can be seen as part of the Government’s policy on competitiveness, led by the Deputy Prime Minister. The complexity of the issues involved meant that Sir Peter did not make his first report to the Cabinet sub-committee on competitiveness until late October, and, indeed, had not completed his task when we took evidence on 13th November.²³

Reasons for the Reviews

14. The Minister for Science and Technology told us that the reviews were necessary; the institutions being reviewed cost about £690m pa - over 10 per cent of “the total government expenditure on science.”²⁴ As he said,

“there is a duty on Government to look carefully to see both whether that science has been delivered most efficiently and whether those research establishments are still reflecting the scientific priorities that they embodied when they were set up.”²⁵

He stressed that the aim of the reviews was for no “other purpose than improving the science base.”²⁶

15. The progression from desk study to multi-departmental scrutiny to prior options reviews to Sir Peter’s Committee can be seen as cumulative work on complex issues. However, whatever the Government’s motives, the series of reviews has been seen as driven by the Government’s preference for private ownership. The Institute of Biology felt that

¹⁹In which categories most or all Research Council Institutes will fall.

²⁰Q124.

²¹Q18.

²²Letter to the Chairman in HC(1995-96) 643, p.xii.

²³Q114.

²⁴Q1.

²⁵Q12.

²⁶Q58.

“whenever the Government does not get the right result it wants from a review, it sets up a further one with the apparent intention of privatising and cutting back on science”²⁷;

and the Royal Society was concerned

“that the programme is being driven by a generic belief in the merits of privatisation, without adequate regard to the strategic role of publicly funded research in promoting the national good.”²⁸

16. This impression has been strengthened by the fact that the reviews followed a “Prior Options” process, rather than being more directly addressed to the wider underlying questions of “what scientific expertise does the country need? How is it best secured?” In the Prior Options process the need for an institution is tested against the following questions:

- Is the function needed?
- Must the public sector be responsible for the function?
- Must the public sector provide the function itself?
- What is the scope for rationalisation?
- How will the function be managed?

Although Professor Graham-Bryce, Principal of the University of Dundee and Chairman of the Marine and Non-Marine Prior Options Steering Committee, accepted that the system helped “challenge internal thinking” he also noted

“It has been difficult to balance the prior options approach against some of the less tangible characteristics of the establishments under review. Assessing business opportunities for bodies whose core activity is long-term basic and strategic research is not straightforward. Placing values on the need to retain an independent, impartial and integrated multidisciplinary research capability is also problematical. While addressing the five key questions posed in the guidance notes it has been important not to lose sight of these issues.”²⁹

17. The British Geological Survey felt that use of the Prior Options process had diminished the reviews’ effectiveness by driving institutions into unnecessarily defensive positions,³⁰ and so had missed the opportunity to consider wider issues. The Minister stressed that privatisation was not necessarily the preferred option,³¹ but, if so, it was unfortunate that the guidelines for the Prior Options process explicitly stated “In considering appropriateness [for privatisation] the presumption is to privatise.”³² The perception that the reviews were driven by a preference for privatisation was shared even by those closely involved with them. Professor Graham-Bryce stated that

“Some members of the Steering Committee have commented that central departments brought to the reviews predetermined positions and objectives. This accentuated the strong guidance given by central departments to conduct the reviews with a presumption that privatisation would provide more cost effective delivery of research.”³³

²⁷POD 16, para 5.

²⁸POD 31.

²⁹POD 24.

³⁰POD 20. See also POD 16, POD 22.

³¹QQ1, 4, 64.

³²Annex B, p.12, para 9.

³³POD 24.

NERC commented

"it is not obvious whether the key driver for the reviews is to secure better science or cheaper science (or both)."³⁴

Frequency of Review

18. While each step in these reviews can be defended, as an attempt to deal with important and complex issues, the end result has been that the organisations concerned have been under repeated review since 1992, and the process is still incomplete. In addition, Research Councils regularly conduct their own reviews, which can be fundamental; for example, the BBSRC's own reviews, which are conducted by scientists and industrialists, not only look at the quality of the science but also examine the "continuing need for each institute."³⁵ The British Geological Survey, a NERC Institute, has been reviewed seven times since 1987.³⁶ The Centre for Ecology and Hydrology, one of the organisations in the second tranche of reviews, was itself only formed in December 1994 as the result of an internal Research Council review and has had little time to demonstrate its effectiveness.³⁷ Sir John Cadogan pointed out that scientists in universities were reviewed every two or three years and "there can be no question that it is right that the institutes should go through exactly the same investigations."³⁸ However, the university staff face peer review of their grant applications, analogous to the Research Councils' internal review of institutes, not continual external scrutiny of their departmental structure. Such frequent review must be destabilising; as the CBI said

"...care must be taken to identify an appropriate timescale for the review process. Whilst some review of performance must be on-going, not least to ensure efficient use of resources against objectives, an overall fundamental review should only be periodic in nature (every three to five years for example)."³⁹

Otherwise there was "a danger of continual fundamental review of an organisation leading to a breakdown in morale and loss of direction"⁴⁰. Even though the Minister asserted

"I really do ask people working in the establishments to realise that we are not attempting to cut the ground from under their feet. This is an attempt to strengthen the science base, not to weaken it"⁴¹

it was widely agreed that the reviews had had a serious effect on morale in the establishments concerned, and some witnesses claimed that such reviews were reducing the ability of research establishments to recruit and retain scientists of high calibre.⁴²

Openness

19. There have been criticisms that the review was insufficiently transparent. The Guidance Notes were made available and there was feedback between review teams and interested

³⁴POD 21.

³⁵HC(1994-95)19-II, p.26.

³⁶POD 20, para 15.

³⁷POD 22.

³⁸Q61.

³⁹POD 27.

⁴⁰POD 27.

⁴¹Q57.

⁴²POD 16, para 57.

parties at an early stage, and a public meeting about the process was held at the Royal Society.⁴³ However, as the process progressed dialogue seems to have diminished. The Centre for Ecology and Hydrology felt the secrecy surrounding the process since submission of the final Report “has been unhelpful to forward planning and undermining to staff confidence.”⁴⁴ As Professor Graham-Bryce said

“Notwithstanding the Government’s decision to publish memoranda, outlining how Ministers have reached their decisions, there is an argument that the reports of the Steering Committees should be published at the time of submission to Ministers. This would facilitate further input to the debate and demonstrate in an open manner the rigour with which the reviews have been conducted.”⁴⁵

As it is, since only edited documents have been made available to Parliament, we cannot test the Royal Academy of Engineering’s assertion that “It appears that the committee has decided in favour of research establishments’ independence despite warnings from review teams”⁴⁶ against Professor Graham-Bryce’s assertion that the process was fair and rigorous.⁴⁷

20. The NERC said that “unlike the Efficiency Scrutiny of PSREs there is no opportunity for interested parties to comment on the findings of the Steering Committee, before decisions are taken by Ministers. Comment on the Steering Committee’s report by users and interested parties would provide further rigour and openness to the process.”⁴⁸ The Minister told us that entering into “a further round of consultation before decisions are taken would only serve to prolong unnecessarily the uncertainty of the review.”⁴⁹ If the reviews had been conducted smoothly and their results announced without delay, this argument would have some force. However, the complexity of the issues involved has meant that, as the Minister acknowledged, the review process has been prolonged.⁵⁰ Moreover, in spite of the emphasis on the need to find individual solutions for individual establishments, there has been a perception, which may not be justified, that Sir Peter Levene’s review was likely to pre-empt the decisions on institutions which had yet to be reviewed or reported upon. These factors, together with the widespread suspicion aroused by the reviews themselves, are damaging the morale of those involved. Greater openness about the options for the institutions referred to Sir Peter Levene’s Committee would have been appropriate.

Costs of the Reviews

21. Many witnesses were concerned that the reviews were diverting resources from science. NERC has estimated the cost of the current reviews of its establishments alone at £0.4m⁵¹; the costs of all the reviews must be far higher. As well as monetary cost, there is the effect on institutions as senior staff spend many hours on work which takes them away from their primary objectives.⁵² The Minister explained “...some expenditure for these reviews is inevitable and probably an investment in the future...If you go back to my figure of £690

⁴³ March 26, 1996.

⁴⁴ POD 23.

⁴⁵ POD 24.

⁴⁶ POD 22.

⁴⁷ POD 24.

⁴⁸ POD 21, para 18.

⁴⁹ Letter to the Chairman published in HC(1995-96)643, p.ix.

⁵⁰ Q66.

⁵¹ POD 21, para 3.

⁵² POD 21.

million of costs, if that is being five per cent spent inefficiently that is a very considerable distortion of what could be spent on the science base.”⁵³

22. We do not question the wisdom of seeking to achieve the maximum return on a public investment. However, we are not convinced that the current reviews have been driven by concern for science rather than financial considerations. If science had been the driving force, it would have been better to have started from a careful consideration of the task of each Research Council and the resources and structures needed to fulfil it, rather than first focusing on the institutes themselves. In considering the wisdom of the current reviews the Government should have taken greater account of the following factors:

- the fundamental reorganisation of the science base, and the Research Councils in particular, following the White Paper;
- the fact that Research Council Institutes were already subject to review, both as a matter of routine and as part of the new Research Councils’ fundamental examination of their organisation;
- compatibility of the institutes with Research Councils’ mission;
- the financial costs of review;
- the appropriateness of the Prior Options process for the institutions included.

Once the reviews were in train the Government should have been aware of the increasing disquiet as the progress was prolonged and have taken steps to counter it by continuing its initial openness. We particularly regret that the reports of the Steering Groups and review teams were not made available to us. If the documents contained material that should clearly remain confidential for commercial reasons, we would have respected that confidentiality.

THE FUTURE OF THE INSTITUTIONS UNDER REVIEW

23. As we have said, a broad distinction can be made between Research Council Institutes and Government Research Establishments, but even within each category there is much variation between individual institutions. Research institutions, be they RCIs or GREs, perform a variety of tasks: they may provide clearly definable services either as sources of policy advice or in framing or enforcing regulation; provide more speculative research that is still clearly linked to a current end-user; collect and curate important data sets; undertake strategic research on topics a Research Council has already identified as priorities; conduct speculative research on topics which may be of future importance; or act as a source of expertise for customers outside the public service. Each institution will perform a number of these tasks; and the appropriate structure for each Institute will depend on the nature of the tasks it undertakes and the balance between them.

24. We note that the greatest concern has been expressed about RCIs; the restructuring or privatisation of GREs is far less problematic. As many witnesses noted, it is most easy to restructure organisations providing clearly definable advice and services, and the DTI laboratories which have been recently privatised⁵⁴ fall into this category. Departments may

⁵³Q53.

⁵⁴The National Engineering Laboratory, The National Physical Laboratory and The Laboratory of the Government Chemist.

also have good reasons for wishing to interpose some distance between their research organisations and the policy groups at the centre, and the announcement that certain Departmental laboratories⁵⁵ are to become Next Steps Agencies provides a way to do that. The institutions which remain are, by their nature, more complex, and witnesses raised a number of objections to wholesale reorganisations. These objections apply with varying degrees of force to different establishments, according to their range of tasks, but, for convenience, are canvassed here.

UK Science Strategy and Mission Drift

25. The main concerns expressed on the consequences of privatisation for Research Council Institutes focus on the problem of "mission drift." A move to the private sector for these institutes could mean that, because of the pressures of the market place, they choose to concentrate on work not aligned with the strategic objectives of the Research Councils. The Royal Society points out that "the defining characteristic of a private body, free to direct its own affairs, is that it can orient its mission in whatever direction it likes. It can also go bankrupt (the ultimate form of mission drift)."⁵⁶

26. The RCIs are also part of the means by which Research Councils ensure that the science base can carry out their long term research requirements. There was a consensus that although universities were a source of intellectual vitality, and links between universities and institutes were invaluable, Research Council Institutes performed functions which universities could not.⁵⁷ As the Food and Drink Federation said:

"Whilst the Research Institutes are focused on research for their customers, universities have to consider priorities between their teaching programmes and their research programmes and are not, therefore, solely focused on R&D objectives. Also, only loose mechanisms exist for co-ordination across disciplines in higher education establishments. The staff of Institutes are committed to generating present and future value for their identified customer groups. Universities will continue to be a valuable source of new initiatives whilst Institutes represent a better management structure for the execution of directed programmes."⁵⁸

27. Giving RCIs full independence would mean Research Councils had to define and purchase the research they needed; it is possible that the price of such research would rise, particularly in areas where it had little immediate relevance to other potential customers. This concern could apply both to strategic research programmes, and to the maintenance and curation of long term databases and archival material. While the DGRC maintained that if the Research Councils were willing to purchase research they would find a provider able to supply it at the right price, the CSA appeared to agree that independent institutions might indeed force up the price of certain services, or even decline to provide them altogether.⁵⁹

28. Even if, in principle, strategic programmes could be purchased by Research Councils from a series of independent institutes, no witnesses felt this would be as effective as the current system, nor as able to respond promptly to emerging issues. Sir Ralph Riley, Chairman of the Board of Directors of Rothamsted Experimental Research Station and the former secretary of the Agriculture and Food Research Council, said:

⁵⁵The Health and Safety Laboratory, the Forestry Commission Research Laboratories, Directorate of Fisheries Research and the Fisheries Research Services.

⁵⁶POD 31, para 4.

⁵⁷POD 16iv, POD 5, POD 18.

⁵⁸POD 14.

⁵⁹QQ76-78.

“responsibility for the ownership of the assets and for the administration of staff policies have been major contributors to the Council’s ability to make decisions on funding that have enabled the knowledge base of the nation to be maintained and extended. For example, when in the early 1980s we started to get hints that the genetic manipulation of plants might be feasible and of economic benefit, the Council could find nowhere in the university system or in the private sector an appropriate activity in plant molecular biology and genetics on to which work on plant genetic engineering could be grafted. But by influencing the direction of research in plant genetics and enabling appropriate people to be recruited in its institutes it was quickly able to create what became an internationally envied inter-institute programme in plant genetic manipulation.”⁶⁰

Foresight

29. A related concern was that the loss of strategic direction could affect the success of the Technology Foresight initiative, which the Food and Drink Federation said had “produced possibly the best ever framework and network for developing sound industry-academia collaborations,”⁶¹ either through privatised institutes neglecting priorities identified through the foresight process, or through their increased focus on the needs of overseas, rather than United Kingdom, customers.⁶² In contrast, the Minister felt that Research Councils would be able to purchase projects related to foresight from the institutes, and could even look further afield than the United Kingdom to do so.⁶³

Restriction of Information

30. Another concern about the effect of privatisation was the restriction it might impose on the free flow of scientific information. One witness said “the results of research by RCIs are, in general, in the public domain. In contrast, awareness of research undertaken under contractual arrangements will be poor, the details confidential, and the results available only to the contracting parties.”⁶⁴

Lack of Independence

31. There were fears that independence from government could in fact act to undermine public or industry trust in an institution’s research.⁶⁵ Although the Minister said that “public trust does not depend upon something that is entirely owned by the Government,”⁶⁶ the Food and Drink Federation stressed the need for “demonstrable independence and objectivity of research and analytical data” to assure public confidence, since “work done in the private sector will be perceived, and thus regarded, as being of less value than that carried out in publicly-funded research establishments which will be regarded as more credible having greater objectivity and independence from vested interests.”⁶⁷

Costs of Change

32. Whatever the relevance of these points to a particular institution under review, it must also be remembered that reorganisation has its costs. The financial costs are likely to be high

⁶⁰POD 6.

⁶¹POD 14.

⁶²POD 22.

⁶³Q82.

⁶⁴POD 17, para 7.2.

⁶⁵POD 14, POD 21, etc.

⁶⁶Q75.

⁶⁷POD 14.

— the BBSRC estimate that the transfer of staff to private pension schemes would involve over £100 million for all eight BBSRC institutes.⁶⁸ Even if the costs of pension crystallisation do not fall on the Science Budget, tender costs alone could be considerable; the Particle Physics and Astronomy Research Council has had to find some £495,000 for issuing tenders for the Royal Observatories from its own budget.⁶⁹ There was general agreement that the costs of restructuring should not reduce the funds available for science, but it is not clear whether this will be possible.⁷⁰

33. Change also has costs which cannot be computed in financial terms, in its effect on morale and effectiveness. The CSA recognised that

“...after looking at all these things, thinking about the science, thinking about what it is you are trying to do, you have to end up weighing the very substantial costs of change against the benefits to be got from change. Even if you could square that circle there would still be all the dislocation.”⁷¹

Transfer of Institutes from Research Councils

34. The Prior Options reviews raise complex issues both in terms of the technical problems surrounding any move towards full independence and the wider considerations about the ways in which the science base should be organised to ensure the strength and co-ordination of the United Kingdom science base. The Minister claimed that any change should be for the good of science. We do not wish the Science and Engineering Base to stagnate but the benefits of change have to be proved, before its costs are incurred.

35. The nearer an institution is to a task based mission, the clearer are the benefits of change. The Minister for Science and Technology said that the privatisation of the Laboratory of the Government Chemist, NEL and NPL, had led to the employment of more scientists “doing a broader range of work, including work for the Government.”⁷² However releasing even GREs with a relatively simple remit from the public sector is not cost free. The Government has paid £369,000 and £1.95 million respectively to the purchasers of the Laboratory of the Government Chemist⁷³ and the National Engineering Laboratory.⁷⁴ There may also be other drawbacks to changing the status of these relatively simple organisations; indeed the Royal Academy of Engineering recommends a review of establishments already privatised or turned into agencies “in order to discover any problems before further privatisations are carried out.”⁷⁵

36. Our prime concern remains, however, for the Research Council Institutes; there are fewer precedents for independence as far as RCIs are concerned. The Institute of Biology noted

“In previous cases, the laboratories were engaged in specific applied research and the provision of scientific services for the Government. This type of work is competitive even when infrastructure overheads are included because the customer can, in advance, see the value of the product and judge the quality of the work. Moreover, in these privatisations

⁶⁸From the BBSRC's in house publication, 'Spectrum', August 1996, issue 15.

⁶⁹Official Report, 19 November 1996, Col.514w.

⁷⁰POD 14, POD 21.

⁷¹Q18.

⁷²Q51.

⁷³Official Report, 16 October 1996, c.958w.

⁷⁴Official Report, 22 November 1995, c.199w.

⁷⁵POD 22, para 10.

the Government has put in place long term contracts guaranteeing income to the newly privatised bodies. Such arrangements seem most unlikely to be workable in the much less certain and high competitive basic research market, and indeed, would be counter-productive to innovation.”⁷⁶

It is unclear whether an “independent” Research Council Institute might be owned or managed by universities, by current management, or by new managers from a commercial operating company.

37. As far as transfer to universities is concerned, the Southampton Oceanographic Centre, which the Committee visited, could be viewed as a possible role model for Research Council Institutes, although NERC remains responsible for most NERC staff transferred there.⁷⁷ The Centre is now one of the three largest oceanography departments in the world, and appears most impressive. However, the transfer to Southampton University required a large capital outlay and even though NERC still provides some 58% of the running costs the Chief Executive, Professor Krebs, felt that “the jury was still out”⁷⁸ on whether in the longer term the Centre would be able to provide the degree of responsiveness required by the Council. It is notable that although three universities were eager to retain their links with RCIs, and were working to ensure that re-organisation did not prevent this, none saw the status quo as hindering such links.⁷⁹

38. There are few clear arguments for major change in the status of institutes. Judging by the edited memoranda available, the prior options review teams found very little evidence of overlap or inefficiency. Dr Jeremy Lucke, the Independent member of the Animal Science Prior Options Steering Committee, noted

“In each institute the research programmes had undergone extensive review by groups of experts representing both scientific and customer interests. It was evident that recent rationalisation of institutes and the ‘lean’ internal management structures had resulted in well defined objectives directed to meet the public need. There is constant review of research programmes and collaboration between institutes to exploit complementary expertise and equipment. I saw no evidence of unnecessary duplication of research effort.”⁸⁰

The memorandum submitted on the reviews of BBSRC agriculture and plant science institutes noted that the steering committee also found “there were no further opportunities for rationalisation” in the plant science institutions reviewed.⁸¹

39. The Government argued that the Research Councils would have greater flexibility and increased freedom to react quickly to changing scientific demands if their institutes were given independent status. The Minister commented that “The Councils’ freedom to fulfil this mission is currently constrained because of its responsibilities, as owner of institutes, for assets and staff.”⁸² A number of those submitting evidence took issue with this point. Professor Mifflin, Director of the Institute of Arable Crops Research said that “this generates the impression that our staff and facilities are not effective in contributing to the mission of the BBSRC. We strongly disagree...we deliver a substantial part of the mission outlined in the White Paper *Realising our Potential* through our basic, strategic and applied research

⁷⁶POD 16iv.

⁷⁷As these staff retire it is expected that they will be replaced by university employees.

⁷⁸Q67, Minutes of Evidence, 24th July 1996.

⁷⁹POD 12, POD 13, POE iv-vii.

⁸⁰POD 7.

⁸¹HC(1995-96)643, Memorandum from the DTI, para 18.

⁸²Letter to the Chairman in HC(1995-96)643, p.xi.

directed to wealth creation and the quality of life.”⁸³ In any event, such flexibility and freedom would only be gained if Research Councils were not required to provide guarantees of work to any independent institutes as the DTI had done to its privatised research establishments.⁸⁴ There was unanimity that the Institutes would be unable to conduct long term programmes without some long term funding, analogous to that provided to the universities by the Higher Education Funding Councils.⁸⁵ If such funding did not come from the Research Councils themselves, thereby reducing their flexibility, the body that provided it would inevitably duplicate the work of the corresponding Research Council.

40. The philosophical basis for the Prior Options reviews, and, indeed, for all earlier reviews, is that customers for research (the Research Councils) should be distanced from contractors (the Institutes). However, it could be argued that the Research Councils already act as proxy contractors for government’s research needs since it is intended they should conduct long term research which only government (the customer) will fund. In these circumstances, the Research Councils should have some discretion about the way in which they organise their work, particularly since, as the Levene-Stewart Review noted, the Research Councils appeared less wedded to the ownership of suppliers than were departments.

“They have been more prepared to contemplate restructuring, including on occasion closure, of in-house facilities and, typically, they are trying to find ways of moving their Institutes and Units into closer relationships with HEIs and industry.”⁸⁶

Since that review the Research Councils have been restructured; they now have strong Chief Executives and Chairmen from business. They have examined their new missions and have engaged in restructuring to ensure they can carry them out efficiently and effectively. Those Research Councils which expressed an opinion on this issue do not support wholesale reorganisation; for example, NERC told us that “some have argued that by moving the establishments to the private sector this would guard against mission stagnation and thus fit them better to react to market forces. Council believes that a degree of stability (not stagnation) is required in order to sustain a sound science base that is capable of being geared up to react to changing circumstances and new priorities.”⁸⁷

41. The Government must ensure that changes to science base establishments are viewed in the wider context and that short term gains in terms of increased efficiency do not obscure the necessary longer term needs of science. When we last reported we drew attention to concerns expressed by the Steering Committee on BBSRC institutes⁸⁸ about “financial obstacles” to full independence and “about the potential for mission drift...and the loss of a strategic approach to capital investment in National facilities.”⁸⁹ The Steering Committee also recommended that “further work should be done on both the process and implications of such a change.”⁹⁰ In establishing Sir Peter Levene’s review, the Government has appeared only to address the first of these. Neither did Sir Peter’s review address the question of ownership of land and buildings nor the fact that in a number of cases these are owned by independent trusts.⁹¹ We hope that Ministers will also take the wider considerations into account.

⁸³POD 15, para 2.

⁸⁴Q83.

⁸⁵See for example POD15, 16, 17 and 20.

⁸⁶*Review of Allocation, Management and Use of Government Expenditure on Science and Technology*, para 1.50.

⁸⁷POD 21, para 16.

⁸⁸The Institute of Arable Crops Research, The Institute of Grassland and Environment Research, The John Innes Centre and The Silsoe Research Institute.

⁸⁹Para 21.

⁹⁰Para 23.

⁹¹POE iv-vii, POE 33, POE 34.

42. We are not opposed to the reorganisation of research establishments; the transfer of departmental research establishments to agencies may well be an advantage. The reviews may demonstrate that some institutions are in need of radical reform. However, the evidence presented to us suggests that this will be the exception rather than the rule, and we suspect that if clearly deliverable benefits for science were available they would have been found in earlier reviews. At a time when Research Councils can fund far fewer than fifty per cent of the alpha rated proposals they receive, costly re-organisation should not be undertaken without a balance of evidence in its favour.

43. Whatever reorganisations take place, there will be a need to ensure that institutions remain efficient and effective, and the United Kingdom science base is able to provide high quality research be it basic, strategic or applied. The Research Councils, as we have noted, already carry out reviews and have been prepared to undertake major reorganisation. However, the history of the last few years suggests that the Government is concerned that their reviews are not sufficiently rigorous, although we have no evidence that this is so. External review of Government Research Establishments is, we believe, currently the exception rather than the rule. Although we believe that there should now be a period of stability, there is a need for regular review of establishments. Such reviews should not favour one model of ownership over another but should, quite properly, consider the extent to which an institution's ownership, or relationship with other research organisations, is appropriate. We agree with the British Geological Survey that

“costly and repetitive *ad hoc* reviews of PSREs must be replaced by a rationalised, audit and assessment strategy which keeps review costs to a minimum and can deliver real improvements in the value and effectiveness of Government R&D.”⁹²

Rather than add another layer of review to existing arrangements, we recommend that the OST works with Departments and Research Councils to produce a system of regular review, say once every five years, which will command the confidence of all concerned. The wholesale disruption of the last few years should not be repeated.

44. The Government's prime responsibility is to protect and enhance the knowledge base. It also needs to secure value for money in the science base. In spite of the brevity of our inquiry, the evidence we received has convinced us there are lessons to be drawn for the future. The scale and conduct of these reviews was profoundly unsatisfactory, and any possible benefits for the Research Council Institutes have almost certainly been overshadowed by the disruption caused. The Research Councils have been established as independent organisations charged with carrying out the science needed to fulfil their missions; they should be left to organise themselves in the way they consider most appropriate for this task.

⁹²POD 20.

ANNEX

Tranche 1: Reporting to Minister by March 1996

Establishment	Parent or sponsor department/research council	Result of Review
ADAS R&D	MAFF	To be privatised next year
Central Science Laboratory	MAFF	Referred to PA Consultants; since referred to Levene
Directorate of Fisheries Research	MAFF	Next Steps Agency 1.4.97
Horticulture Research International	MAFF	Levene
Fisheries Research Services	Scottish Office	Next Steps Agency 1.4.97
Macaulay Land Use Research Institute	Scottish Office	Levene
Scottish Agricultural Science Agency	Scottish Office	Further work by Scottish Office
Scottish Crop Research Institute	Scottish Office	Levene
Forestry Commission Research Laboratories	Forestry Commission	Next Steps Agency 1.4.97
Building Research Establishment	Department of the Environment	To be privatised next year
Health and Safety Laboratory	Health and Safety Executive	To remain an Agency (created on 1.4.96)
National Weights and Measures Laboratory	DTI	Remain an Agency
Police Scientific Development Branch	Home Office	No announcement
Institute of Arable Crops Research	BBSRC	Levene
Institute of Grassland and Environmental Research	BBSRC	Levene
John Innes Centre	BBSRC	Levene
Silsoe Research Institute	BBSRC	Levene
Daresbury and Rutherford Appleton Laboratories	OST/CCLRC	To remain in public sector - further work towards privatisation to be conducted

Tranche 2: Reporting to Ministers by July 1996

Establishment	Parent or Sponsor department/ sponsor	Result of Review
Veterinary Laboratories Agency	MAFF	No announcement
Moredun Research Institute	Scottish Office	No announcement
Hannah Research Institute	Scottish Office	No announcement
Babraham Institute	BBSRC	No announcement
Institute for Animal Health	BBSRC	No announcement
Roslin Institute	BBSRC	No announcement
British Geological Survey	NERC	No announcement
Centre for Coastal and Marine Sciences including: Dunstaffnage Marine Laboratory Plymouth Marine Laboratory Proudman Oceanographic Laboratory	NERC	No announcement
Centre for Coastal and Marine Sciences including: Institute for Freshwater Ecology Institute of Hydrology Institute of Terrestrial Ecology Institute of Virology and Environment Microbiology	NERC	No announcement

Tranche 3: Reporting to Ministers by December 1996

Establishment	Parent or sponsor department/research council	Result of Review
National Institute for Biological Standards and Control	Department of Health	No announcement
National Radiological Protection Board	Department of Health	No announcement
Public Health Laboratory Service	Department of Health	No announcement
Rowett Research Institute	Scottish Office	No announcement
Institute of Food Research	BBSRC	No announcement
Dunn Nutrition Unit	MRC	No announcement
Radiobiology Unit	MRC	No announcement
Reproductive Biology Unit	MRC	No announcement
Toxicology Unit	MRC	No announcement
Virology Unit	MRC	No announcement

Note: Institutes to be reviewed taken from Official Report, 26 January 1996, c.422-423w.

PROCEEDINGS OF THE COMMITTEE RELATING TO THE REPORT

WEDNESDAY 27 NOVEMBER 1996

Members present:

Sir Giles Shaw, in the Chair

Dr Jeremy Bray
Mrs Anne Campbell
Dr Lynne Jones

Sir Trevor Skeet
Mr Patrick Thompson
Sir Gerard Vaughan

Draft Report (The Prior Options Reviews of Public Sector Research Establishments), proposed by the Chairman, brought up and read.

Ordered, that the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 21 read and agreed to.

Paragraph 22 read, amended, and agreed to.

Paragraphs 23 to 44 read and agreed to.

Annex read, amended, and agreed to.

Resolved, That the Report be the First Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Several papers were ordered to be appended to the Minutes of Evidence.

Ordered, That the Appendices to the Minutes of Evidence taken before the Committee be reported to the House. — (*The Chairman.*)

Several Memoranda were ordered to be reported to the House.

[Adjourned till Wednesday 4th December at Four o'clock.]

LIST OF WITNESSES

VOLUME II

Monday 4 November 1996

Mr Ian Taylor MBE MP, Minister for Science and Technology, Professor Sir Robert May, Government Chief Scientific Adviser and Professor Sir John Cadogan, Director General of Research Councils

Wednesday 13 November 1996

Sir Peter Levene KBE, the Prime Minister's Adviser on Efficiency and Effectiveness and Mr Anthony Beattie

LIST OF MEMORANDA

VOLUME II

Memoranda from:

1. J A Bennet, Secretary General, Association of Independent Research and Technology Organisations (POD 4)
2. C J Leaver FRS FRSE, Head of Department of Plant Sciences, University of Oxford (POD 5)
3. Sir Ralph Riley (POD 6)
4. Dr Jeremy Lucke (POD 7)
5. Professor J T Brauholtz, IACR-Long Ashton (POD 8)
6. The Public Services, Tax and Commerce Union (POD 9)
7. Professor Sir Richard Southwood FRS (POD 10)
8. Centre for Coastal and Marine Sciences (POD 11)
9. Dame Elizabeth Esteve-Coll, University of East Anglia (POD 12)
10. Sir John Kingman FRS, Vice-Chancellor, University of Bristol (POD 13)
11. Food and Drink Federation (POD 14)
12. Professor B J Miflin, Institute of Arable Crops Research (POD 15)
13. Institute of Biology (POD 16)
14. D T and S L Donovan (POD 17)
15. Council of Science and Technology Institutes (POD 18)
16. British Geological Survey (POD 20)
17. Natural Environment Research Council (POD 21)
18. The Royal Academy of Engineering (POD 22)
19. Centre for Ecology & Hydrology (POD 23)
20. Professor Ian Graham-Bryce, Principal, University of Dundee (POD 24)
21. Institution of Professionals, Managers and Specialists (POD 25)
22. Royal Astronomical Society (POD 26)
23. Confederation of British Industry (POD 27)

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24. Sir Martin Rees, Astronomer Royal (POD 29)
 25. Institute of Physics (POD 30)
 26. The Royal Society (POD 31)
 27. Council of Civil Service Unions (POE 32)
 28. Professor B J Mifflin, Institute of Arable Crops Research (POE 33)
 29. Michael G Falcon, Chairman of the Trustees, John Innes Foundation (POE 34)

UNPRINTED MEMORANDA

Additional memoranda have been received from the following and have been reported to the House, but to save printing costs they have not been printed and copies have been placed in the House of Commons Library where they may be inspected by Members. Other copies are in the Record Office, House of Lords, and are available to the public for inspection. Requests for inspection should be addressed to the Record Office, House of Lords, London SW1. (Tel 0171-219 3074). Hours of inspection are from 9.30 am to 5.30 pm on Mondays to Fridays.

Annexes to the IPMS submission (POD 25)

Memorandum from the Ministry of Agriculture, Fisheries and Food (POD 19)

Memorandum from the Health and Safety Executive (POD 28)

Attachments to the Memorandum from the Institute of Biology (POD 16i-iv)

Letter to the Chairman from Keith Humphreys, Chairman, Babraham Institute Board of Directors (PODi)

Letter to the Clerk from J S Gill, The Royal College of Veterinary Surgeons (PODi iii)

Letter to the Clerk from Professor Roger Williams and attachments (POE iv-vii)

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